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PCT/EP2003/005278



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Translation

Applicant's or agent's file reference 2108/Dr.Tbr/	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/005278	International filing date (day/month/year) 20 May 2003 (20.05.2003)	Priority date (day/month/year) 04 June 2002 (04.06.2002)
International Patent Classification (IPC) or national classification and IPC C08J 7/04, C09D 7/12		
Applicant RÖHM GMBH & CO. KG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 28 August 2003 (28.08.2003)	Date of completion of this report 02 February 2004 (02.02.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages _____ 1-33 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-22 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-22	YES
	Claims		NO
Inventive step (IS)	Claims	1-22	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following document:

D1: EP-A-1 022 318 (JSR CORP) 26 July 2000 (cited in the application)

1. Novelty (PCT Article 33(2)):

The subject matter of the present claims 1 to 22 is novel in comparison with the prior art as cited in the international search report. None of the documents listed in the international search report discloses a self-cleaning plastics body that can be produced by applying a siloxane coating to a plastics substrate and then curing the coating, increasing the surface energy of the cured coating to a value of at least 10 mN/m, followed by application of a second coating containing TiO₂ particles and then curing.

2. Inventive step (PCT Article 33(3))

The subject matter of the present claims 1 to 22 also involves an inventive step, since D1, which is regarded as the closest prior art, taken either

alone or in combination with any other document cited in the international search report, contains nothing to indicate the claimed plastics body for the following reasons:

D1 discloses a method for increasing the dirt resistance of films by coating the films with an inner siloxane layer and an outer siloxane layer containing TiO_2 particles.

The plastics body claimed in the present claims differs from that known from D1 in that it can be produced by the aforementioned method steps, i.e. the surface energy of the first layer is increased to a value of at least 10 mN/m before the second siloxane layer is applied.

In comparison to the teaching from D1, the present application addresses the problem of devising a dirt-repelling or self-cleaning plastics body which in addition to having good dirt-repelling properties also has good scratch-resistant properties.

The applicant has shown in three examples that an increase in the surface energy of the first layer leads to an increase in the thickness of the second layer, thereby improving scratch-resistance. The problem of interest is thus solved by the application subject matter.

Since the applicant was able to prove by way of comparative examples that non-activation of the first coating resulted in considerably worse scratch-resistance, and also since the claimed plastics bodies are not suggested by any other

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document, the subject matter of the application can
be considered to involve an inventive step.